

WHAT IS CLAIMED IS:

1. A method for desensitizing a crystal having nonlinear optical properties, in particular a lithium niobate or a lithium tantalate crystal, to the damaging effects of intense exposure to light ("optical damage"), the damage being caused by light-induced variations in the refractive indices, wherein the dark conductivity of the crystal is enhanced by doping with extrinsic ions.
2. The method as recited in Claim 1, wherein the crystal is doped with protons which increase the protonic dark conductivity, a concentration of more than  $3 \times 10^{24} \text{ m}^{-3}$ , in particular of more than  $4 \times 10^{24} \text{ m}^{-3}$  being achieved.
3. The method as recited in Claim 1 or 2, wherein the crystal is doped with deuterons which increase the deuteronic dark conductivity, a concentration of more than  $1 \times 10^{24} \text{ m}^{-3}$  being achieved.
4. The method as recited in one of the preceding Claims, wherein the crystal is doped with ions which increase the electronic dark conductivity, a concentration of more than  $2 \times 10^{24} \text{ m}^{-3}$  being achieved.
5. The method as recited in Claim 4, wherein the ions are iron ions, whose concentration reaches more than  $1 \times 10^{25} \text{ m}^{-3}$ .
6. The method as recited in one of the preceding Claims, wherein the ion concentration is increased by heating the crystal in an ion-rich atmosphere.

7. The method as recited in Claim 6,  
wherein the heating process is carried out under high  
pressure, in particular of over 100 bar.
8. The method as recited in one of the preceding Claims,  
wherein, during the doping process, an electrical field  
is applied to the crystal.
9. A crystal, which is desensitized by increasing its dark  
conductivity by applying the method as recited in one of  
the preceding claims.
10. An optical component having a crystal as recited in Claim  
9.